

Smartwave SW4000

Irving Stewart assesses alternative boat materials whilst putting the Smartwave SW4000 to the test.



Way back in the late 1950s and 1960s the great majority of small family boats were still built in wood, traditional clinker built boats were expensive and simple marine ply craft were not particularly attractive. When Glass Reinforced Plastic (GRP) moulding became widespread in the early 1960s boat building was revolutionised; suddenly family boats became affordable in much the same way as small cars in the 1920s and '30s. Over subsequent decades GRP became the recreational boat material of choice worldwide as it enabled complex styling and automotive standards of finish to be achieved, often without skilled labour. As a general rule of thumb alternative materials have tended to only be used for special applications such as racing, commercial and military craft.

Fashion vs. Logic

Let's consider for a moment whether this passion for GRP is really logical. A large majority of hard-hulled boats in use are



There are twin revolving helm seats

actually quite small. For example canoes, sailing dinghies, rowing boats, RIBs, small trailer powerboats and family cruisers are mostly under, say, 25ft. GRP is a superb material where light weights are critical for performance, or when boats have to be physically carried – small sail dinghies and canoes for example.

It's also true to say that a vast number of small boats tend to be tenders, general runabouts, fishing platforms and even workboats, of which many are 'long in the

tooth'. Their owners are not making a lifestyle statement, rather they see a boat as an intrinsic part of their everyday lives. In other words many small boats are not pampered – in fact some are positively abused! For such craft GRP is seriously flawed simply because it does not have the inherent flexibility and resistance to abuse of (far more expensive, admittedly) traditionally built wooden craft. Unlike their resilient organic predecessors, GRP boats can suffer badly when bounced up a slipway, subjected to sudden impact, chuffed, ignored or generally abused.



40 smooth horses



Some eventually become waterlogged; others suffer from gel coat crazing, delamination and osmosis – all of which reduce their working life, value and appearance.

There’s Always An Alternative

Illogically, many larger craft produced in GRP are actually heavier than they would be in steel! The latest precision moulding techniques, and more importantly surface coating systems, now offer true alternatives in both steel and aluminium (with virtually

GRP finish quality) to boat builders. Other alternatives like pure plastics are not a recent invention either. The Victorians first discovered the forerunners of today’s plastics but used the material frugally – simply because it was not aesthetically pleasing! Soon plastics became common place and a century later the world is inundated with the material – all oil-dependant! They have revolutionised electronics, medicine, hygiene and our households in countless positive ways. Unfortunately the very versatility, and longevity, of plastics is also responsible for (avoidable) environmental damage. Polythene bags, food packaging and a myriad of other consumer products litter our countryside and oceans as well as filling land fill sites.

Polyethylene was discovered by ICI around 1935, but kept secret during WW2 because it was a critical component in airborne radar systems – which Great Britain alone possessed. In the 1950s Karl Ziegler further developed the material to withstand heat, and won a Nobel Prize. Since then it has been used in a myriad of applications demanding serious resistance to chemicals, electricity, abuse, impact, boiling water, abrasion and even sunshine. The material is strong and extremely simple to mould, repair and eventually recycle. Polyethylene is used for underground pipes, wrapping bread, washing up bowls and chemical containers. It’s also absolutely ideal for small boats!

Polyethylene roto-moulded boats have been around for eons and have made many friends. This is largely because they’re

extremely tough (you can hit them with a hammer, or bounce off rocks, with virtual impunity), the material can be made buoyant – even when not shaped like a boat, it’s easy to cut, mould, weld and repair – plus its manufacturing process is far more eco-, and health-, friendly than styrene based GRP. Add to these factors that it’s relatively cheap, maintenance is simple and the results long lasting and you have an attractive package.

Well known boat companies, such as Jeanneau, Pioner, Old Town Canoes, Sea Rover and Atlantic together produce thousands of craft aimed at those seeking indestructible boats. Some purely style-oriented people say “plastic boats are not as good as GRP” and, from a purely cosmetic aspect, they may have a point, but from any practical viewpoint their argument simply does not stack up. I remember a Land Rover dealer answering a potential customer who had said the Defender was ugly; “If you want a vehicle you can’t break, buy the ‘landie’ – if you want something pretty go and buy a print in Boots!”

The same thing cannot be said of today’s poly boats, many of which are visually very striking! In the current climate of concern for the environment and re-cycling, there are serious arguments against the use of GRP. Intrinsically, it has extremely eco-unfriendly chemical constituents, is almost impossible to recycle and has serious health hazards during production. A number of excellent alternative materials exist and this is the direction this particular story is taking! ▶

Crazy Kiwis

In the past decade over half New Zealand's boat builders have swung away from GRP, for the many reasons already mentioned. In common with the Aussies (and the Scots) many of their boat owners tend to be a pretty tough bunch of 'lads'. They drive craft up beaches at speed, tend to carry boats on pick-up trucks, and have a nasty habit of sliding them down concrete slipways without using a trailer, some even throw them off low, remote cliffs to launch them to save a trip round the coast!

Having got their ever-tolerant craft afloat, they frequently barge into rocks, chuck diving gear aboard without ceremony and load their craft to the maximum – and more. Some even drive their boats up rocky mountain streams at great speed. And yet they expect them to go like stink, handle well, and above all survive!

A couple of years ago Kiwi designer Scot Robson came up with a simple indestructible and unsinkable little 4m deep Vee hulled 'fast runabout' that would give great handling and ride. The design offered clear deck space, stacks of stowage and even a screen and comfy seats. Above all it would perform with a small outboard. He then designed a bunch of goodies that could be added in the form of variable seating, spray hood, hull side rails etc... Realising that Scot had a winner on his hands Advantage Plastics made a few



You can pull the Smartwave with a hatchback

prototypes on which they (bravely) let loose the press and a few infamous owners. Remarkably none of the boats broke. Not surprisingly a few didn't come back either, as their testers demanded squatters' rights, and became owners. The boat soon went into production and became the Smartwave SW4000.

Now They're Over Here!

A few years ago, for some reason that I've failed to discover, a young Kiwi called Julian Dale came over here and settled in Dundee, Scotland. He established a company called Marine Revolution importing polyethylene boats from NZ. Since then demand has grown in leaps and bounds – so now you get the connection! Last year I went north to try out a few of Julian's latest boats. As the weather

continued to deteriorate the size of the test boats reduced, and finally we got round to the little Smartwave. This was fitted with a throaty 40hp Yamaha two-stroke engine which, even two up, was great fun. However we didn't have time to record any performance figures and so arranged a re-play.

That time the Gods smiled. The weather was good, the sea merely 'interesting' and we had a new ultra smooth 40hp Suzuki astern. All boded well. As before the little boat was launched without ceremony, then it simply shrugged off the spray as it ploughed its way into the Firth.

With the Suzuki whispering astern the Smartwave stayed on the plane at a smidgeon under 10mph, just over 3,000rpm. Remarkably the boat's speed almost doubled by 4,000rpm – yet could still be thrown about without coming off the boil.

Normally, I try to work in 1,000rpm increments but soon discovered that 4,400rpm produced a very pleasant optimum speed, 23mph. This may not sound particularly quick but in a 13ft boat it's a fair rate of knots in choppy water!

Giving the Suzuki its head, our velocity peaked at 33mph – about the same speed as a little Fletcher with similar power – no mean feat for a medium Vee hulled runabout! Any boat on test is thrown about and deliberately over driven – and although this is great fun, there's a serious purpose. By deliberately trying to get a boat to misbehave a tester can determine its in-built characteristics, safety factor, handling and any vices in a bid to establish whether it would be equally safe in the hands of a novice.

In common with any good small RIB the Smartwave 4000 is extremely forgiving, intrinsically safe and unlikely to put anyone in serious danger even if driven badly. It's far more likely its crew would admit defeat before the boat!

FACT FILE

VERDICT

Even if you can crush tinnies with one hand you won't break this boat!

SPECIFICATION

LOA: 4.2m

Beam: 1.8m

Draft: .3m

Weight: 220kg boat only (330kg as tested)

Price (boat only): £4,995

As tested (with Suzuki DF40 and 2-wheel bunk trailer): £9,989

FOR A SIMILAR BUDGET

- Poseidon 450 fisher
- Rib-X 450 Explorer
- Orkney Sunsport dory

TEST FIGURES

	PLANING	CRUISING	OPTIMUM	MAXIMUM
Speed	9.5mph	18.5mph	23mph	33mph
RPM	3,200	4,000	4,400	6,000



OTHER BOATS TO CONSIDER

- Pioneer 12 Sport
- Terhi Big Fun
- Rigiflex Cap 400

WHO TO TALK TO

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